

# Morbidity and Mortality



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**EPIDEMIOLOGIC NOTES AND REPORTS**  
**HUMAN RABIES - California**

On Jan. 15, 1971, a 6-year-old boy from the Bay area near San Francisco, California, was visiting relatives in Jalisco State, Mexico, when he was bitten on the left cheek by a sick dog. The dog died 3 days later of unknown causes and was not examined for rabies. No antirabies treatment was given, and the boy subsequently returned to California.

The patient was well until March 27 (71 days after having been bitten), when he experienced a temperature of 105° F., malaise, and anorexia. Two days later, he was admitted to a hospital in Oakland with fever, hallucinations, delirium, wheezing, and hyperventilation. At that time, no mention of the dog bite was made. On the fourth day after the onset of his illness, the patient showed symptoms of hydro-

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phobia (facial grimacing and spitting on oral contact with water), and a clinical diagnosis of rabies was considered. On the fifth day, focal seizures prompted initiation of diphenylhydantoin therapy, and on the following day, he became semi-comatose with fluctuating periods of responsiveness. A tracheostomy was performed for hypoxia; apnea developed 3 days later.

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**TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES**  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	15th WEEK ENDED		MEDIAN 1966 - 1970	CUMULATIVE, FIRST 15 WEEKS		
	April 7, 1971	April 18, 1970		1971	1970	MEDIAN 1966 - 1970
Aseptic meningitis	88	23	31	726	399	423
Brucellosis	6	11	4	37	52	52
Diphtheria	2	-	-	59	94	41
Encephalitis, primary:						
Arthropod-borne & unspecified	24	30	30	315	301	301
Encephalitis, post-infectious	5	7	7	91	116	130
Hepatitis, serum	145	162	78	2,417	1,947	1,104
Hepatitis, infectious	1,273	1,018	850	18,124	16,244	12,532
Malaria	64	82	43	1,130	1,001	665
Measles (rubeola)	3,673	1,778	1,778	33,323	18,480	18,480
Meningococcal infections, total	82	80	80	1,006	1,043	1,150
Civilian	76	60	63	859	931	1,039
Military	6	20	8	147	112	112
Mumps	4,130	3,892	-	55,060	40,395	-
Poliomyelitis, total	-	-	1	4	2	4
Paralytic	-	-	1	3	2	4
Rubella (German measles)	1,874	2,746	2,155	19,294	24,436	19,388
Tetanus	1	2	4	20	24	30
Tularemia	-	5	2	26	30	31
Typhoid fever	7	3	4	72	64	66
Typhus, tick-borne (Rky. Mt. spotted fever)	2	1	-	7	3	4
Rabies in animals	109	68	96	1,321	1,081	1,153

**TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY**

	Cum.		Cum.
Anthrax:	-	Psittacosis: Calif.-1	10
Botulism:	-	Rabies in Man: Calif.-1	1
Leprosy: Ill.-1, Tex.-2	36	Rubella congenital syndrome: Calif.-3, Fla.-1	24
Leptospirosis: La.-1	9	Trichinosis: Alaska-1	27
Plague:	-	Typhus, murine:	2

## RABIES - California (Continued from front page)

Indirect fluorescent rabies antibody (IFRA) tests on the patient's sera performed by the California Viral and Rickettsial Diseases Laboratory have demonstrated a rising rabies (IFRA) antibody titer (April 2, titer 0; April 12, 1:4096). (Reported by Dillip Bhatt, M.D., Fellow, Robert Gerdson, M.D., attending physician, Edward Duffie, M.D., Chief of Staff, Children's Hospital, Oakland, California; Harald Johnson, M.D., Richard Emmons, M.D., California State Viral and Rickettsial Diseases Laboratory, James Chin, M.D., Chief, Bureau of Communicable Disease Control, California Department of Public Health; and an EIS Officer.)

## Editorial Note

While no specific antirabies treatment is known to be effective once clinical symptoms have appeared, the management of a recent case in Ohio (MMWR, Vol. 19, No. 50) indicates that recovery is possible. Following the example set in that case, the patient is receiving aggressive clinical support, with particular attention directed to pulmonary care, cardiovascular and neurologic monitoring, fluid balance, and physical therapy.

This is the second reported case of human rabies in California within 2 years (MMWR, Vol. 18, No. 18).

## SALMONELLOSIS - Washington

On Dec. 28, 1970, a 17-month-old girl from Seattle, Washington, had onset of vomiting, bloody diarrhea, and a temperature of 105° F. which lasted for 1 week. Stool specimens were submitted to the Seattle-King County Health Department Laboratory, and *Salmonella typhi-murium* was isolated from the patient's stool, but not from those of three asymptomatic family members.

Epidemiologic investigations revealed that the family had purchased a parakeet from a local pet store on December 24 as a Christmas present. The bird had experienced diarrhea and died within a week. The baby had had no direct contact with the parakeet, but had crawled on the floor under the bird's cage. Household dust found in a vacuum cleaner bag 3 weeks after onset of the baby's illness was cultured and

yielded *S. typhi-murium*. Two weeks later, the mother found old newspapers in the basement containing droppings from the parakeet; viable salmonellae were also cultured from these droppings.

*S. typhi-murium* isolated from the child's stool, household dust, and bird droppings were examined at the CDC Laboratory and were all untypable by phage.

(Reported by Herbert W. Anderson, B.S., R.S., Environmental Epidemiologist, Donald R. Peterson, M.D., Director of Epidemiology, Seattle-King County Department of Public Health, Washington, and the Laboratory Division, CDC.)

## Editorial Note

This is the sixth reported case of parakeet-associated salmonellosis since 1961.

## INFECTIOUS HEPATITIS - Kentucky

Between June 1970 and April 1971, 118 cases of infectious hepatitis occurred in Barren County, Kentucky, population 29,000. The greatest number of cases occurred in January 1971 (Figure 1). A total of 87 cases (73.7 percent) occurred in Glasgow, the county seat, and the rest occurred in rural areas. The majority of cases (84 cases; 71.2 percent) were in grade-school children, and the median age was 7 years. The highest attack rates were in children 5 to 9 years of age (Table 1); the male:female ratio was almost 1:1 (60/58).

The first case occurred on June 23 in a 6-year-old boy who lived on a farm northwest of Glasgow. The farm is supplied by well-water and has outdoor toilets. The exact source of the child's infection could not be found. Symptoms of infectious hepatitis developed in the mother and father of the index case on July 24 and August 17, respectively. They had baby-sat several times in the summer for families in a poverty area on the west side of Glasgow.

In Glasgow, most cases of hepatitis occurred in children at two elementary schools: School A and School B. At School A, which is on the west side of Glasgow, the first case occurred in a 7-year-old boy on September 26. This boy had had frequent contact with the mother of the index case, and he also had repeated exposure to seven schoolmates who later developed hepatitis. A total of 25 subsequent cases occurred in School A children and their families, and all these

Table 1  
Hepatitis Attack Rates, by Age Group -  
Barren County, Kentucky, June 1970-April 1971

Age Group	Number of Cases	Population	Attack Rate (Cases/1,000)
< 1	0	600	0
1-4	4	2,350	1.7
5-9	63	2,900	21.7
10-14	24	2,900	8.3
15-24	10	3,950	2.5
25-34	6	3,600	1.7
35-44	6	3,750	1.6
45-54	3	3,600	0.8
55-64	1	2,750	0.4
65-74	0	2,100	0
> 75	1	1,200	0.8
Total	118	29,700	4.0

cases except one could be traced directly or indirectly to contact with the 7-year-old boy.

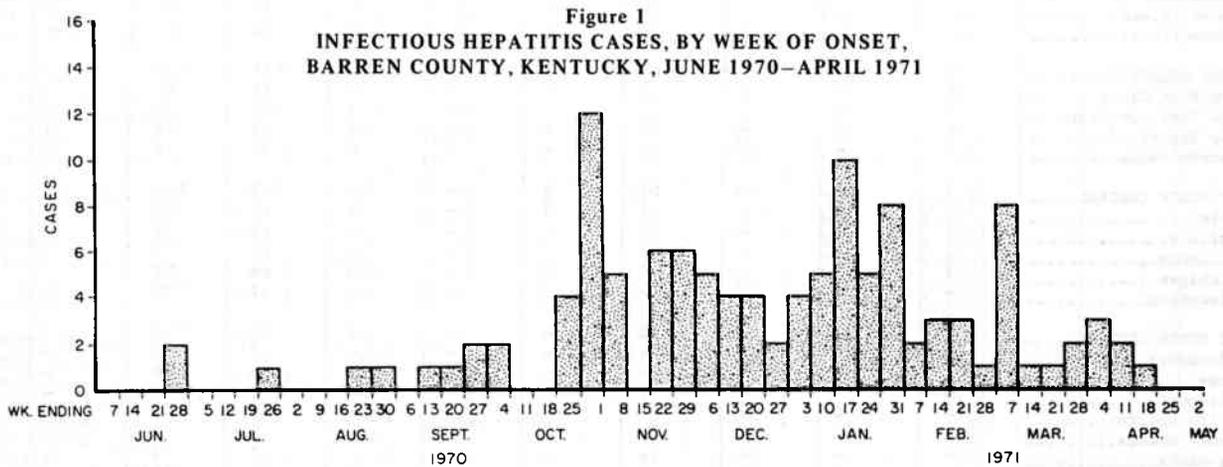
At School B, the first case occurred on September 21 in a 9-year-old girl. The source of her infection could not be determined. She had contact with five children in her school who later contracted hepatitis. All 34 subsequent cases in School B children and their family members could be traced to exposure to the 9-year-old girl.

Epidemiologic investigation revealed that nearly all homes in Glasgow and many in the county are supplied by a unified municipal water supply. The distribution of hepatitis cases in this outbreak, however, did not parallel the distribution of city water. Furthermore, multiple coliform counts of the municipal water in 1970 and 1971 were negative. Further investigation showed that approximately 75 percent of the families and all the schools in Barren County receive milk from one dairy, but there was no connection between milk supply and distribution of cases. A total of 108 patients (91.5 percent) were interviewed; none gave a common food or restaurant history. No common exposure to toxins, drugs,

needles, shellfish, or pets was documented.

In this outbreak, hepatitis appears to have been spread by person-to-person contact. Person-to-person exposure could be documented in 49 (45.4 percent) of the 108 cases interviewed and could be presumed in an additional 44 (40.8 percent) of the cases.

(Reported by Mrs. Molly Carman, R.N., Administrative Assistant, Barren County Health Department; Mr. Wallace B. Guerrant, Field Investigator, and Calixto Hernandez, M.D., Director, Division of Epidemiology, Kentucky State Department of Health; and a team of EIS Officers.)



#### INTERNATIONAL NOTES SALMONELLOSIS – United Kingdom

Salmonellosis, usually a food-borne infection, may, when introduced into a hospital ward, spread by a variety of other means, and become a serious and sometimes intractable problem. This is illustrated by two recently reported outbreaks, one in an orthopedic unit and one in a maternity unit.

The orthopedic unit consisted of a female ward with 10 beds and a male ward with 12 beds, separated by a corridor, but sharing the same nursing and domestic staff. *Salmonella panama* was first isolated from the stool of a female patient with diarrhea. About 1 month earlier, a male patient, who had then been in the ward for a week, developed diarrhea which lasted for 1 week. No pathogen was isolated from any of his stool specimens, and the symptom was thought to be due to antibiotic therapy. This patient was incontinent of feces and difficult to nurse; he disturbed other patients and so had had several temporary residences at night, including the female side-ward, before being permanently accommodated in the male side-ward. He was considered to have been the principal disseminator of infection in this outbreak, since swabs of the floor, window-ledge, and curtains around his original ward bed yielded heavy growths of *S. panama*. The organism was also isolated from several other sites in both wards, the sluice and cleaning equipment, the kitchen sink drain, a washing-up mop, and the outside of a tin of biscuits.

Stool specimens from all patients and staff members on the ward were examined, and another six cases and 10 asymptomatic carriers were found. In addition, inquiries revealed that a patient who had been discharged about the time that the first male patient had become ill, was admitted 2 days later to an infectious diseases hospital with diarrhea due to *S. panama*. Examination of stool specimens from patients in other wards yielded *S. panama* from a child in the pediatric ward with diarrhea of recent onset and from an asymptomatic carrier in a surgical ward. All other hospital staff were examined, and five were found to be infected. Two elderly female orthopedic patients died; salmonella septicemia was reported as the cause of death in one patient and as a contributory cause in another.

The original source of infection was not detected, but the incident shows how widely salmonellae may become disseminated when an infected patient with diarrhea is not isolated. There is also the need for caution in interpreting a negative bacteriological report on a specimen from a patient receiving or recently given antibiotic therapy.

In the second outbreak, *S. panama* was first isolated from an 8-day-old baby with loose stools in the premature baby unit of a general hospital. Two more cases in 4 and 5-

(Continued on page 142)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED  
APRIL 17, 1971 AND APRIL 18, 1970 (15th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	DIPH- THERIA	ENCEPHALITIS			HEPATITIS			MALARIA	
				Primary including unsp. cases		Post In- fectious	Serum	Infectious		1971	Cum. 1971
				1971	1970	1971	1971	1971	1970		
UNITED STATES.....	38	6	2	24	30	5	145	1,273	1,018	64	1,130
NEW ENGLAND.....	1	-	-	-	1	-	6	76	77	3	40
Maine.....	-	-	-	-	-	-	-	7	7	-	2
New Hampshire.....	-	-	-	-	-	-	-	8	8	-	1
Vermont.....	-	-	-	-	-	-	-	6	2	-	1
Massachusetts.....	1	-	-	-	1	-	1	30	32	3	29
Rhode Island.....	-	-	-	-	-	-	1	11	15	-	3
Connecticut.....	-	-	-	-	-	-	4	14	13	-	4
MIDDLE ATLANTIC.....	15	-	-	4	5	-	65	231	152	5	110
New York City.....	4	-	-	3	-	-	16	34	27	1	11
New York, Up-State...	1	-	-	-	1	-	13	68	33	-	24
New Jersey.....	8	-	-	1	4	-	30	58	54	3	52
Pennsylvania.....	2	-	-	-	-	-	6	71	38	1	23
EAST NORTH CENTRAL.....	4	-	-	10	9	-	15	192	150	3	50
Ohio.....	1	-	-	3	3	-	5	45	50	1	12
Indiana.....	-	-	-	1	-	-	-	11	14	-	3
Illinois.....	2	-	-	3	1	-	-	40	22	1	11
Michigan.....	1	-	-	3	5	-	10	89	54	1	17
Wisconsin.....	-	-	-	-	-	-	-	7	10	-	7
WEST NORTH CENTRAL.....	-	-	-	3	-	-	2	44	59	3	88
Minnesota.....	-	-	-	-	-	-	-	5	12	-	11
Iowa.....	-	-	-	-	-	-	-	2	8	-	9
Missouri.....	-	-	-	1	-	-	-	6	18	-	18
North Dakota.....	-	-	-	-	-	-	-	1	2	-	-
South Dakota.....	-	-	-	-	-	-	-	-	1	-	-
Nebraska.....	-	-	-	-	-	-	-	7	2	-	6
Kansas.....	-	-	-	2	-	-	2	23	16	3	44
SOUTH ATLANTIC.....	7	1	-	2	8	2	10	161	114	5	165
Delaware.....	-	-	-	-	-	-	-	6	3	1	1
Maryland.....	-	-	-	-	-	-	-	23	8	-	26
Dist. of Columbia...	-	-	-	-	-	-	-	-	-	-	-
Virginia.....	2	-	-	2	-	-	2	26	17	3	22
West Virginia.....	-	-	-	-	-	-	-	5	11	-	6
North Carolina.....	1	-	-	-	2	-	-	10	12	1	51
South Carolina.....	-	1	-	-	1	-	-	8	7	-	8
Georgia.....	-	-	-	-	-	-	-	26	9	-	29
Florida.....	4	-	-	-	5	2	8	57	47	-	22
EAST SOUTH CENTRAL.....	4	-	-	-	1	-	3	71	93	6	102
Kentucky.....	-	-	-	-	-	-	-	20	29	6	86
Tennessee.....	2	-	-	-	-	-	1	34	37	-	-
Alabama.....	2	-	-	-	1	-	2	12	22	-	14
Mississippi.....	-	-	-	-	-	-	-	5	5	-	2
WEST SOUTH CENTRAL.....	2	2	2	1	-	1	3	157	86	22	280
Arkansas.....	-	-	-	-	-	-	-	4	-	-	9
Louisiana.....	-	-	1	1	-	-	2	31	7	6	29
Oklahoma.....	-	1	-	-	-	-	-	21	16	1	38
Texas.....	2	1	1	-	-	1	1	101	63	15	204
MOUNTAIN.....	1	-	-	1	-	1	5	84	50	3	74
Montana.....	-	-	-	1	-	-	-	4	3	-	1
Idaho.....	-	-	-	-	-	1	-	8	3	-	2
Wyoming.....	-	-	-	-	-	-	-	-	1	-	1
Colorado.....	-	-	-	-	-	-	2	15	18	3	54
New Mexico.....	-	-	-	-	-	-	-	25	1	-	5
Arizona.....	1	-	-	-	-	-	-	11	14	-	7
Utah.....	-	-	-	-	-	-	3	14	10	-	3
Nevada.....	-	-	-	-	-	-	-	7	-	-	1
PACIFIC.....	4	3	-	3	6	1	36	257	237	14	221
Washington.....	-	1	-	-	-	-	-	40	18	-	1
Oregon.....	-	-	-	-	-	-	-	31	17	-	6
California.....	4	2	-	3	6	1	36	173	198	14	189
Alaska.....	-	-	-	-	-	-	-	2	2	-	2
Hawaii.....	-	-	-	-	-	-	-	11	2	-	23
Puerto Rico.....	2	-	-	-	-	-	-	33	51	-	2
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Pa. delete 2

Hepatitis, infectious: N.H. 1, N.J. delete 1 (1970)

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED  
APRIL 17, 1971 AND APRIL 18, 1970 (15th WEEK) - CONTINUED

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		POLIOMYELITIS		
	1971	Cumulative		1971	Cumulative		1971	Cum. 1971	Total 1971	Paralytic	
		1971	1970		1971	1970				1971	Cum. 1971
UNITED STATES.....	3,673	33,323	18,480	82	1,006	1,043	4,130	55,060	-	-	3
NEW ENGLAND.....	199	1,259	271	5	43	38	127	3,257	-	-	-
Maine.....*	12	589	5	-	5	-	5	584	-	-	-
New Hampshire.....	30	88	14	-	4	3	4	349	-	-	-
Vermont.....	6	57	1	-	-	3	-	-	-	-	-
Massachusetts.....	15	204	203	2	18	14	37	823	-	-	-
Rhode Island.....	8	31	14	-	2	3	24	776	-	-	-
Connecticut.....	128	290	34	3	14	15	57	725	-	-	-
MIDDLE ATLANTIC.....	374	3,431	2,624	15	128	178	187	3,754	-	-	-
New York City.....	197	2,059	438	8	24	45	63	688	-	-	-
New York, Up-State...	18	255	107	-	34	34	NN	NN	-	-	-
New Jersey.....	47	353	1,058	5	34	64	45	1,075	-	-	-
Pennsylvania.....	112	764	1,021	2	36	35	79	1,991	-	-	-
EAST NORTH CENTRAL.....	748	6,577	4,018	3	107	118	1,821	22,662	-	-	-
Ohio.....	217	2,180	1,488	1	28	54	837	4,489	-	-	-
Indiana.....	197	980	161	-	8	11	204	3,101	-	-	-
Illinois.....	77	1,601	1,630	-	34	27	203	2,400	-	-	-
Michigan.....	89	570	404	2	30	22	44	5,339	-	-	-
Wisconsin.....	168	1,246	335	-	7	4	533	7,333	-	-	-
WEST NORTH CENTRAL.....	443	2,888	1,876	7	92	54	340	3,613	-	-	-
Minnesota.....*	-	44	24	-	13	6	68	629	-	-	-
Iowa.....	250	865	61	-	6	7	211	1,947	-	-	-
Missouri.....	55	1,050	626	1	34	37	8	523	-	-	-
North Dakota.....	19	116	194	-	2	2	14	200	-	-	-
South Dakota.....	7	167	64	2	5	-	5	144	-	-	-
Nebraska.....	-	17	867	1	11	2	13	53	-	-	-
Kansas.....	112	629	40	3	21	-	21	117	-	-	-
SOUTH ATLANTIC.....	254	3,517	3,259	19	157	236	282	3,798	-	-	1
Delaware.....	1	14	170	1	1	3	6	71	-	-	-
Maryland.....	2	51	684	1	24	24	10	338	-	-	-
Dist. of Columbia....	-	4	303	-	7	1	-	55	-	-	-
Virginia.....	23	797	776	-	15	20	14	466	-	-	-
West Virginia.....	23	229	113	-	2	5	44	1,063	-	-	-
North Carolina.....	63	1,192	319	1	22	49	NN	NN	-	-	-
South Carolina.....	36	419	263	3	14	18	22	505	-	-	-
Georgia.....	24	158	4	-	11	26	-	1	-	-	1
Florida.....	82	653	627	13	61	90	186	1,299	-	-	-
EAST SOUTH CENTRAL.....	444	4,640	313	10	80	83	359	4,398	-	-	-
Kentucky.....	159	2,272	177	5	23	28	120	1,617	-	-	-
Tennessee.....	39	360	93	5	28	33	201	2,185	-	-	-
Alabama.....	42	734	24	-	18	17	33	520	-	-	-
Mississippi.....	204	1,274	19	-	11	5	5	76	-	-	-
WEST SOUTH CENTRAL.....	830	7,810	4,445	11	92	154	458	4,211	-	-	1
Arkansas.....	36	248	19	-	3	15	1	36	-	-	-
Louisiana.....	225	1,119	46	5	30	38	30	89	-	-	-
Oklahoma.....	5	592	173	-	6	10	3	123	-	-	-
Texas.....	564	5,851	4,207	6	53	91	424	3,963	-	-	1
MOUNTAIN.....	202	1,585	786	2	28	17	105	2,263	-	-	-
Montana.....	99	594	14	1	2	-	9	261	-	-	-
Idaho.....	9	153	5	-	2	3	1	98	-	-	-
Wyoming.....	16	43	-	-	-	1	2	99	-	-	-
Colorado.....	46	413	82	-	4	5	18	736	-	-	-
New Mexico.....	11	179	95	-	2	-	28	366	-	-	-
Arizona.....	12	134	580	-	8	6	40	619	-	-	-
Utah.....	9	66	6	1	9	2	7	84	-	-	-
Nevada.....	-	3	4	-	1	-	-	-	-	-	-
PACIFIC.....	179	1,616	888	10	279	165	451	7,104	-	-	1
Washington.....	72	448	74	1	13	19	143	3,350	-	-	-
Oregon.....	10	147	120	3	18	15	55	701	-	-	1
California.....	90	973	647	6	245	130	210	2,601	-	-	-
Alaska.....	-	8	2	-	-	-	4	56	-	-	-
Hawaii.....	7	40	45	-	3	1	39	396	-	-	-
Puerto Rico.....	16	105	640	-	-	2	50	421	-	-	-
Virgin Islands.....	-	5	5	-	-	1	-	2	-	-	-

\*Delayed reports: Measles: Me. 1, Minn. 8  
Mumps: Me. 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

APRIL 17, 1971 AND APRIL 18, 1970 (15th WEEK) - CONTINUED

AREA	RUBELLA		TETANUS		TULAREMIA		TYPHOID FEVER		TYPHUS FEVER TICK-BORNE (Rky. Mt. Spotted)		RABIES IN ANIMALS	
	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971	1971	Cum. 1971
UNITED STATES.....	1,874	19,294	1	20	-	26	7	72	2	7	109	1,321
NEW ENGLAND.....	71	713	-	-	-	-	1	4	-	-	5	99
Maine*.....	4	139	-	-	-	-	-	-	-	-	4	92
New Hampshire.....	1	10	-	-	-	-	-	-	-	-	1	1
Vermont.....	10	40	-	-	-	-	-	-	-	-	-	6
Massachusetts.....	33	345	-	-	-	-	1	4	-	-	-	-
Rhode Island.....	8	46	-	-	-	-	-	-	-	-	-	-
Connecticut.....	15	133	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	146	1,256	-	4	-	-	1	7	-	1	2	67
New York City.....	25	190	-	4	-	-	-	3	-	-	-	-
New York, Up-State..	5	242	-	-	-	-	1	3	-	-	1	65
New Jersey.....	81	261	-	-	-	-	-	-	-	-	-	-
Pennsylvania.....	35	563	-	-	-	-	-	1	-	1	1	2
EAST NORTH CENTRAL....	374	4,012	-	2	-	1	-	4	-	-	10	97
Ohio.....	21	457	-	1	-	1	-	3	-	-	2	28
Indiana.....	76	741	-	1	-	-	-	-	-	-	4	12
Illinois.....	93	795	-	-	-	-	-	-	-	-	2	21
Michigan.....	110	1,311	-	-	-	-	-	1	-	-	2	20
Wisconsin.....	74	708	-	-	-	-	-	-	-	-	-	16
WEST NORTH CENTRAL....	70	1,737	-	1	-	4	-	-	-	-	25	310
Minnesota.....	2	188	-	1	-	-	-	-	-	-	3	56
Iowa.....	19	376	-	-	-	-	-	-	-	-	7	84
Missouri.....	8	884	-	-	-	4	-	-	-	-	4	59
North Dakota.....	22	59	-	-	-	-	-	-	-	-	4	58
South Dakota*.....	1	27	-	-	-	-	-	-	-	-	-	23
Nebraska.....	1	33	-	-	-	-	-	-	-	-	-	-
Kansas.....	17	170	-	-	-	-	-	-	-	-	7	30
SOUTH ATLANTIC.....	224	1,359	-	7	-	12	4	19	2	3	9	143
Delaware.....	13	24	-	-	-	-	-	1	-	-	-	-
Maryland.....	4	70	-	-	-	3	-	3	-	-	-	-
Dist. of Columbia...	-	2	-	-	-	-	-	-	-	-	-	-
Virginia.....	13	107	-	-	-	5	-	1	-	-	2	40
West Virginia.....	55	214	-	-	-	-	1	2	-	-	2	60
North Carolina.....	-	14	-	-	-	4	1	3	-	1	-	-
South Carolina.....	62	317	-	-	-	-	-	-	2	2	-	-
Georgia.....	-	-	-	2	-	-	-	2	-	-	4	25
Florida.....	77	611	-	5	-	-	2	7	-	-	1	18
EAST SOUTH CENTRAL....	117	1,585	1	4	-	6	-	6	-	2	16	151
Kentucky.....	57	716	-	-	-	2	-	2	-	-	6	82
Tennessee.....	41	729	-	1	-	2	-	2	-	1	9	43
Alabama.....	13	88	1	2	-	2	-	2	-	-	1	26
Mississippi.....	6	52	-	1	-	-	-	-	-	1	-	-
WEST SOUTH CENTRAL....	347	2,925	-	-	-	1	-	5	-	1	29	322
Arkansas.....	12	259	-	-	-	-	-	-	-	-	2	29
Louisiana.....	97	191	-	-	-	1	-	3	-	-	3	13
Oklahoma.....	-	38	-	-	-	-	-	-	-	1	16	166
Texas.....	238	2,437	-	-	-	-	-	2	-	-	8	114
MOUNTAIN.....	33	1,115	-	-	-	2	-	2	-	-	-	4
Montana.....	2	92	-	-	-	1	-	-	-	-	-	-
Idaho.....	3	29	-	-	-	-	-	-	-	-	-	-
Wyoming.....	1	553	-	-	-	-	-	-	-	-	-	-
Colorado.....	15	140	-	-	-	-	-	-	-	-	-	-
New Mexico.....	-	129	-	-	-	-	-	-	-	-	-	2
Arizona.....	11	136	-	-	-	-	-	2	-	-	-	2
Utah.....	1	26	-	-	-	1	-	-	-	-	-	-
Nevada.....	-	10	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	492	4,592	-	2	-	-	1	25	-	-	13	128
Washington.....	72	749	-	-	-	-	-	-	-	-	-	-
Oregon.....	50	354	-	-	-	-	-	-	-	-	-	-
California.....	369	3,385	-	2	-	-	1	25	-	-	12	100
Alaska.....	-	30	-	-	-	-	-	-	-	-	1	28
Hawaii.....	1	74	-	-	-	-	-	-	-	-	-	-
Puerto Rico.....	3	4	-	2	-	-	-	1	-	-	2	22
Virgin Islands.....	-	-	-	-	-	-	-	-	-	-	-	-

\* Delayed reports: Rubella: Me. 1  
Tetanus: P.R. 1 (1971) 1 (1970)  
Rabies in animals: S. Dak. 23

# Morbidity and Mortality Weekly Report

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**TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED APRIL 17, 1971**

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
<b>NEW ENGLAND:</b>	741	474	53	28	<b>SOUTH ATLANTIC:</b>	1,174	620	44	47
Boston, Mass.-----	242	151	16	7	Atlanta, Ga.-----	156	81	4	7
Bridgeport, Conn.-----	38	25	6	2	Baltimore, Md.-----	239	109	5	9
Cambridge, Mass.-----	27	18	5	—	Charlotte, N. C.-----	45	14	—	7
Fall River, Mass.-----	29	21	1	—	Jacksonville, Fla.-----	78	40	9	—
Hartford, Conn.-----	75	41	3	6	Miami, Fla.-----	121	63	2	2
Lowell, Mass.-----	40	26	5	3	Norfolk, Va.-----	53	30	3	2
Lynn, Mass.-----	13	9	—	1	Richmond, Va.-----	69	39	2	3
New Bedford, Mass.-----	34	27	—	—	Savannah, Ga.-----	42	17	2	5
New Haven, Conn.-----	46	29	—	1	St. Petersburg, Fla.-----	99	86	5	2
Providence, R. I.-----	56	32	3	2	Tampa, Fla.-----	86	47	3	5
Somerville, Mass.-----	13	9	1	—	Washington, D. C.-----	145	74	8	3
Springfield, Mass.-----	40	25	4	—	Wilmington, Del.-----	41	20	1	2
Waterbury, Conn.-----	25	20	—	1	<b>EAST SOUTH CENTRAL:</b>	747	398	31	43
Worcester, Mass.-----	63	41	9	4	Birmingham, Ala.-----	95	47	3	8
<b>MIDDLE ATLANTIC:</b>	3,445	2,092	163	115	Chattanooga, Tenn.-----	62	33	3	5
Albany, N. Y.-----	36	21	1	2	Knoxville, Tenn.-----	43	24	2	1
Allentown, Pa.-----	47	35	8	—	Louisville, Ky.-----	132	68	11	10
Buffalo, N. Y.-----	182	109	5	7	Memphis, Tenn.-----	204	107	4	8
Camden, N. J.-----	49	29	5	2	Mobile, Ala.-----	47	27	3	1
Elizabeth, N. J.-----	33	21	1	—	Montgomery, Ala.-----	56	31	1	3
Erie, Pa.-----	50	32	3	—	Nashville, Tenn.-----	108	61	4	7
Jersey City, N. J.-----	87	55	7	4	<b>WEST SOUTH CENTRAL:</b>	1,354	741	60	82
Newark, N. J.-----	88	45	2	1	Austin, Tex.-----	38	16	9	3
New York City, N. Y.†	1,747	1,076	80	53	Baton Rouge, La.-----	34	14	3	—
Paterson, N. J.-----	54	28	4	—	Corpus Christi, Tex.-----	42	18	—	5
Philadelphia, Pa.-----	394	211	3	17	Dallas, Tex.-----	184	99	1	9
Pittsburgh, Pa.-----	193	109	12	7	El Paso, Tex.-----	59	28	3	6
Reading, Pa.-----	59	40	—	1	Fort Worth, Tex.-----	80	50	1	4
Rochester, N. Y.-----	119	85	12	5	Houston, Tex.-----	243	128	8	15
Schenectady, N. Y.-----	34	20	2	2	Little Rock, Ark.-----	78	42	3	2
Scranton, Pa.-----	58	42	4	3	New Orleans, La.-----	193	109	7	9
Syracuse, N. Y.-----	79	48	3	4	Oklahoma City, Okla.-----	108	64	2	10
Trenton, N. J.-----	66	38	4	6	San Antonio, Tex.-----	126	80	2	8
Utica, N. Y.-----	35	22	4	1	Shreveport, La.-----	65	34	7	3
Yonkers, N. Y.-----	35	26	3	—	Tulsa, Okla.-----	104	59	14	8
<b>EAST NORTH CENTRAL:</b>	2,768	1,548	79	121	<b>MOUNTAIN:</b>	532	325	16	22
Akron, Ohio-----	65	27	—	1	Albuquerque, N. Mex.-----	32	24	2	—
Canton, Ohio-----	42	22	3	5	Colorado Springs, Colo.-----	36	23	1	2
Chicago, Ill.-----	801	432	16	45	Denver, Colo.-----	140	84	3	6
Cincinnati, Ohio-----	131	84	3	1	Ogden, Utah-----	21	9	1	1
Cleveland, Ohio-----	243	142	3	12	Phoenix, Ariz.-----	121	73	1	6
Columbus, Ohio-----	96	50	—	9	Pueblo, Colo.-----	43	28	5	3
Dayton, Ohio-----	125	70	—	4	Salt Lake City, Utah-----	62	32	2	3
Detroit, Mich.-----	407	218	9	13	Tucson, Ariz.-----	77	52	1	1
Evansville, Ind.-----	47	28	4	1	<b>PACIFIC:</b>	1,877	1,154	44	60
Flint, Mich.-----	58	30	—	2	Berkeley, Calif.-----	20	14	1	—
Fort Wayne, Ind.-----	62	36	6	3	Fresno, Calif.-----	46	26	2	3
Gary, Ind.-----	49	18	7	2	Glendale, Calif.-----	56	40	2	1
Grand Rapids, Mich.-----	32	18	5	1	Honolulu, Hawaii-----	74	36	2	6
Indianapolis, Ind.-----	160	83	2	4	Long Beach, Calif.-----	116	88	4	2
Madison, Wis.-----	37	16	5	3	Los Angeles, Calif.-----	665	409	17	13
Milwaukee, Wis.-----	117	80	—	3	Oakland, Calif.-----	89	52	2	2
Peoria, Ill.-----	38	24	2	4	Pasadena, Calif.-----	28	19	1	1
Rockford, Ill.-----	42	27	5	1	Portland, Oreg.-----	156	95	4	6
South Bend, Ind.-----	52	32	4	2	Sacramento, Calif.-----	68	44	1	2
Toledo, Ohio-----	103	74	3	3	San Diego, Calif.-----	120	79	1	5
Youngstown, Ohio-----	61	37	2	2	San Francisco, Calif.-----	134	71	1	2
<b>WEST NORTH CENTRAL:</b>	894	551	28	32	San Jose, Calif.-----	42	27	—	1
Des Moines, Iowa-----	54	37	2	—	Seattle, Wash.-----	156	87	3	8
Duluth, Minn.-----	25	17	1	—	Spokane, Wash.-----	67	43	1	5
Kansas City, Kans.-----	45	22	3	5	Tacoma, Wash.-----	40	24	2	3
Kansas City, Mo.-----	156	95	3	6	<b>Total</b>	<b>13,532</b>	<b>7,903</b>	<b>518</b>	<b>550</b>
Lincoln, Nebr.-----	49	33	2	—	<b>Expected Number</b>	<b>13,041</b>	<b>7,595</b>	<b>490</b>	<b>515</b>
Minneapolis, Minn.-----	92	59	2	4	<b>Cumulative Total</b> (includes reported corrections for previous weeks)	<b>206,535</b>	<b>120,774</b>	<b>8,743</b>	<b>9,173</b>
Omaha, Nebr.-----	87	58	2	1					
St. Louis, Mo.-----	243	140	5	10					
St. Paul, Minn.-----	74	46	1	3					
Wichita, Kans.-----	69	44	7	2					
Las Vegas, Nev.*	18	11	2	1					

\*Mortality data are being collected from Las Vegas, Nev., for possible inclusion in this table, however, for statistical reasons, these data will be listed only and not included in the total, expected number, or cumulative total, until 5 years of data are collected.

† Delayed Report for week ended April 10, 1971

## SALMONELLOSIS – (Continued from page 137)

day-old babies followed within the next few days. No isolation was made from the mothers or five other babies in the unit. The unit was closed for cleaning and disinfection.

In the next 2 weeks, *S. panama* was isolated from stool specimens from six babies in the main maternity nursery; most of them had diarrhea, sometimes tinged with blood. At this point, the whole unit was closed to new admissions. Cultures of swabs from all staff, patients, and the environment were negative except for one maternal excreter of *S. panama*. Samples taken from the milk kitchen were all negative. Sterile disposable catheters were in use for sucking out babies, but it was then found that a plastic adaptor which connected the catheter to the suction tube of a portable vaporizer yielded a profuse, pure growth of *S. panama*; the proximal rubber tubing was also heavily infected. This machine had apparently been used on four of the most recently infected babies, but could not account for all cases. Two wall suction tubes in the labor ward were then shown to be heavily contaminated with the same organism. These tubes had been used for both mothers and babies and did not appear to have been disconnected and cleaned after use.

Only one of the infected babies in the premature unit had possibly been exposed to a contaminated sucker, suggesting that cross-infection may also have played a part in this outbreak, as often happens in such circumstances.

All the babies referred to had only negligible to moderately severe diarrhea. However, two babies born in the unit

the previous month became ill after their return home. One died of *S. panama* meningitis; *S. panama* was found in the blood, and cerebrospinal fluid of the other child who is now recovering. Further inquiries showed that infection was even more widespread than had appeared. Seven other babies delivered at the maternity unit were admitted to the infectious diseases hospitals from home and found to be infected with *S. panama* over a period of several months. *S. panama* is a common serotype generally and was known to be present in the locality. Some babies who were ill at home may have been infected outside the hospital, but it seems likely that most of them and of those found in hospitals were infected by the suction tubes or by cross-infection in the unit. Disposable catheters, tubes, and connecting pieces have now been introduced and unnecessary use of mechanical suction curtailed.

(From notes based on reports to the Public Health Laboratory Service from Public Health and Hospital Laboratories in the United Kingdom and Republic of Ireland, published in the British Medical Journal, Feb. 20, 1971.)

## Erratum, Vol. 20, No. 13, p. 111.

In the article "Measles – United States, 1970-71," Washington, D.C. was omitted as one of the areas reporting fewer measles cases so far this EY as compared to last EY.

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The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

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